

RAILWAY MATTERS.

A SLIP of great extent took place on the Taff Vale Railway on Sunday before last, between the Troeyrhiew station and Incline Top, but happily without loss of life.—A bridge on the Trent Valley Railway, between Tamworth and Lichfield, was lately destroyed by a flood, and the traffic on the line temporarily suspended. The bridge must have been a small one, as the engineers expected to effect a crossing by means of a temporary erection in a day or two.—On the Birmingham and Gloucester line, on Thursday in last week, a considerable quantity of earth and rock in the deep cutting at the north end of the King's Norton tunnel slipped from the banks and entirely blocked up the line.—The reduction in the fares, and alteration in the trains, on the Great Western line, commenced, we understand, on 1st instant. A journey to London, from Swindon, first class, will now cost 13s. being a difference of only one shilling more than the late charge, second class. The consequence must, we have no doubt, be a great gain to the company in first-class passengers. The second-class fares have also been reduced, though we believe not in the same ratio.—The first of the new class of passenger-engines, constructed on the patent of Mr. McConnell, the locomotive superintendent of the London and North-Western Railway, has made an experimental trip from Wolverton to the Euston-square terminus. The engine is one which, it is stated, would take an average express train from London to Birmingham (112 miles) in two hours. It is a six-wheeled one, with 7 feet driving-wheels. The fire-box has been projected 4 feet 9 inches into the barrel of the boiler, forming a combustion chamber. This has enabled the inventor to obtain no fewer than 260 superficial feet of heating surface in the fire-box. For the purpose of producing as near as possible perfect combustion, a number of the stays connecting the combustion chamber with the shell of the boiler are tubular, and the air being drawn through them impinges on the flame. This produces a perfect mixture of the gases, and the largest amount of serviceable calorific is evolved. The tubes, 303 in number, are 7 feet in length, and 1½ inch in diameter. The whole of the heating surface is, therefore, about 1,240 superficial feet. The engine in forty-five minutes got up sufficient steam to move her. The steam-pipe presents a broad, flat surface to the heated air as it passes from the tubes into the smoke-box, so that the steam is in a manner dried as it passes into the cylinder. The stays to this form of steam-pipe are tubular, and the heat from the boiler tubes passes through these stays, and assists in "drying" the steam before its effective force is given to the pistons. Two of this class of engines have been delivered to the London and North-Western Company, one built by Messrs. Fairbairn, of Manchester, and the other by Messrs. J. B. Wilson, of Leeds.

METROPOLIS BUILDING ACT.

THE dictum of the referees as to additions, has spread consternation among the builders of suburban houses: perhaps these buildings are multiplying faster than the population, and therefore a check may be wholesome, although annoying. However, it is a fitting time to take up some questions bearing on the point, and to discuss them freely. The small area permitted under the Act for third and fourth rate houses, is the real secret of the mischief—the necessity of the addition. It is a monstrous thing that an extra fee to the district surveyor shall be paid for the little kitchen and bed-room over, erected behind the hundreds of fourth-rate houses that have been built since the Metropolitan Buildings Act: the kitchen and bed-room over are to all intents and purposes part of the house, and yet an artificial line is drawn, and the back buildings have been styled "the addition;" for what purpose this rear building is separated, except to give an extra fee to the surveyor, is a great mystery.

Strong convictions on this subject led me some time since to sift the Parliamentary

paper, No. 83, issued last year, and as some of the results illustrate the grievance I complain of, I subjoin the following figures:—

FEEB ARCHIVED BY DISTRICT SURVEYORS.						
1847.		1848.		1849.		
New Bldgs.	Additions	New Bldgs.	Additions	New Bldgs.	Additions	
First-rate bldgs.	94	627	108	529	144	675
Second do. . .	619	938	303	822	411	845
Third do. . .	1,084	1,536	913	1,325	1,045	1,552
Fourth do. . .	4,055	1,254	3,301	1,001	3,790	1,151

The columns headed additions, I believe embrace alterations, and it is to be regretted that these items were not separated: there can be no doubt, I apprehend, that four-fifths at least of the amount would be for additions to new buildings; and on this basis I argue: reducing the figures in the above table to a per centage and average of the three years, the figures stand thus:—

	First-rate buildings and additions	2 3 per cent.
Second-rate ditto	ditto	14 "
Third-rate ditto	ditto	39 6 "
Fourth-rate ditto	ditto	82 1 "

Taking the buildings only, a still higher per centage is shown for fourth-rate buildings, viz. 70·2 per cent. It is obvious that the builders of fourth-rate houses are by far the best customers to the district surveyor: as a question of per centage, on the cost, it will be easy to show that the builders of fourth-rate houses pay a much higher rate than any other. Take the cost of a second-rate house at 1,000*l.*; third-rate house, 600*l.*; or, with additions, 750*l.*; fourth-rate house, 170*l.*; or, with additions, 220*l.*: the following table illustrates this question:—

	Value	District Surveyor's Fee.	Fee per cent. in Value.
Second-rate	1,000	63s.	0·3
Third-rate	600	50s.	0·4
Ditto, with additions	750	75s.	0·6
Fourth-rate	170	30s.	0·8
Ditto, with additions	220	40s.	0·9

I think these figures incontestably prove that a monstrous tax has been laid upon the dwellings of the humbler classes, and I hope that this evil may be set right in the next effort at building legislation for the metropolis. W.

LAW OF FIXTURES.

IN the case of Wood, a bankrupt, Mr. Commissioner Foulhaque delivered a judgment of some importance as respects the law of fixtures. Divers articles were found in the bankrupt's possession at the time of the bankruptcy. He was a brewer, and these articles were what were called "brewers' plant and brewers' fixtures." He observed that much of the confusion of the cases had arisen from the popular use of the word "fixture," without discriminating between the degrees of annexation, varying from the solidity of a stone foundation to the tacking of a carpet or the hanging of a picture. The true question was, were they goods and chattels? for to goods and chattels only did the statute of James and the subsequent statute derived from it apply in its enactment as to order and disposition. Nor was this statute singular in this limitation: only goods and chattels could be taken in execution: only goods and chattels could be distrained; and under both forms such articles as the greater part of those now in question had been taken; with this exception, that under a distress, while the law required that the goods should be removed from the premises, only such could be taken as could be returned on reply in the same state. In questions between heir and executor such articles also had been held to pass to the executor, as personality, and not to the heir as realty. For each of these purposes, therefore, the articles were held to be goods and chattels. Why, then, were they not to be so held as between the mortgagee and assignee of a bankrupt's estate? He (the Commissioner) confessed that he was unable to discover the reason in law or equity; while, on the policy of the law of bankruptcy, he saw every reason to prefer the doctrine, that what was in the bankrupt's open possession, by the apparent ownership of which he obtained credit of the trading world, should pass to the benefit

of all his creditors, rather than to one only, who by means of a private or secret conveyance had obtained a preference over them. As to what was strictly realty, this was unavoidable, since the right to the realty must follow the title, and not the possession; but there was no reason for extending this right of the realty beyond this necessity, and in all doubtful cases, he believed, the courts would lean (as Lord Kenyon said they had leaned) in favour of creditors, and for the interest of trade. He (the Commissioner) came to the conclusion, firstly, that such articles as merely rested upon the soil by their own weight, however heavy, were goods and chattels; secondly, that if they were slightly connected one with another, and ultimately with the freehold, yet might be severed without material injury to the freehold, they followed the same rule; thirdly, that articles, though themselves fixed to the freehold by bolts and screws, or nails or pegs, or other similar contrivances, were also goods and chattels; fourthly, that articles mainly sunk in the soil, or built on it, were of the realty, and did not pass to the assignees.

PREVENTION OF RAILWAY COLLISIONS.

A FENDER invented by Mr. A. T. Forder, with this important object in view, has been tried at Exnington, and, according to a local correspondent, with considerable success. The improved fender consists of two parts, one called the striker, and the other the receiver. The striker is formed of a plate of metal, into which a number of strong bars of steel of different lengths are fastened. The receiver is a similar plate with apertures, over which are placed pieces of spring-steel, the centres of which correspond with those of the bars in the striker. The two bars are fixed together, so that the latter may slide towards the receiver, and each bar of the striker be exactly opposite the centre of its antagonistic steel plate. One fender is intended to be fastened to each end of every carriage. As the striking bars are of different lengths, and project accordingly from the plate, it is manifest that upon the centre part of the plate being struck the bars will successively bend and break its opposing spring plate; and if there are a sufficient number of them, the fender, it is said, will absorb the whole of the impelling force, and, in case of a rail collision, stop the train without injury to passengers or carriages, inasmuch as the whole of the blow will have been expended in breaking the plates. The force of the collision conveyed to the carriages will be equal to a succession of slight blows, each of itself insufficient to injure the train. The working model exhibited consisted of a railway 5 feet high at one end, and 3 inches at the other, being 30 feet in length, and forming an inclined plane or fall of one in six. Upon the highest position of the rails were placed two carriages fitted up with glass windows, and in all respects similar to first and second-class railway conveyances: at the end of each was appended a model fender of the above description; and upon a given signal, the train, each carriage of which weighed about sixty pounds, ran down the rails against a block placed at the bottom. The result of the collision, according to our informant, was that the plates in the fender were nearly all broken, while the carriages remained perfectly uninjured. There was no visible recoil, and the train was brought to a dead stand in an instant. It seems worth further investigation.

NEW PRINCIPLE IN ROPEMAKING.—The application of a new principle to large and heavy ropes is thus described in the *Wolverhampton Chronicle*:—"It is a four-strand flat rope, 350 yards long, and weighs nearly four tons, and is nine inches wide at the top, and gradually tapers to six inches at the bottom. By this gradual diminution of the rope, which is the new principle adopted, and which Messrs. Griffin and Morris are now engaged in registering, there is a saving of a ton in the weight of the rope, while its strength when in use is undiminished."